

To establish a *prima facie* case of obviousness, each of three requirements must be met. First, the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. (*See* M.P.E.P. § 2143.) Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. (*See id.*) Third, a reasonable expectation of success must exist. (*See id.*)

In this case, a *prima facie* case of obviousness has not been established for at least the reason that Murai and Ashton, separately or taken in combination, fail to teach or suggest each and every feature recited by claims 1-22.

For example, Murai and Ashton, separately or in combination, fail to teach or suggest “an underlying pattern of a level underlying a thin film layer” as recited by independent claim 1, an “underlying layer having an underlying pattern” as recited by independent claim 8; and “an underlying pattern of an underlying layer” as recited by independent claims 15 and 22. On Page 2 of the Office Action, the Examiner asserts that Murai teaches “classifying an underlying pattern of a level underlying a thin film layer” at paragraph 34, lines 41-45. The cited text, however, does not teach or suggest anything about features related to an underlying pattern or underlying layer. Instead, the section upon which the Examiner relies states that modification of individual patterns (*see* 113 in Fig. 1) is executed with the use of a look-up table or an approximate equation (*see* 112 in Fig. 1), which correlate respective elements of the plural pattern area density maps with the dimensions of the dimensions of the pattern modification. (*See* Murai, ¶ 34, lines 41-45.) This section, nor in fact, any other part of Murai, teaches or suggests even the existence of an underlying pattern or underlying layer, let alone features

related to them such as “classifying an underlying pattern of a level underlying a thin film layer,” as recited in claim 1, for example.

Similarly, Murai also fails to teach or suggest “dividing the processing pattern into a first pattern which overlaps with the underlying pattern and a second pattern which does not overlap with the underlying pattern,” as recited by independent claim 8 (independent claims 1, 15, and 22, though of different scope, recite similar features). In alleging that this feature is taught by Murai, the Examiner points to the Abstract, lines 1-8; paragraph 16, lines 24-30; and figures 2, 3A-3C, 4, 5D, 7E, and 10. These sections show that in Murai, the patterns for exposure are divided into subdivided regions; that the pattern density of the plurality of the subdivided regions of various sizes is calculated on the basis of a subdivided region; and that sub-fields are divided into complementary patterns. Although Murai does teach dividing patterns, it, does not teach or suggest dividing the processing pattern into a first pattern *which overlaps with the underlying pattern* and a second pattern *which does not overlap with the underlying pattern* as recited, for instance by claim 8, since, as discussed above, Murai fails to teach or suggest an “underlying pattern” or “underlying layer.”

Ashton also does not teach or suggest these missing elements since it is also completely silent about features related to an underlying pattern, an underlying layer, and dividing the processing pattern into a first pattern which overlaps with the underlying pattern and a second pattern which does not overlap with the underlying pattern. As a result, the combination of Murai and Ashton proposed by the Examiner would not result in each and every feature recited by independent claims 1, 8, 15, and 22.

Because Murai and Ashton, separately or in combination, fail to disclose at least these features of independent claims 1, 8, 15, and 22, a *prima facie* case of obviousness has not been

shown and the rejection as to those claims should be withdrawn and the claims allowed. Furthermore, claims 2-7, 9-14, and 16-21 are allowable at least by virtue of their dependence on the allowable independent claims. *See In re Fine*, 837 F.2d 1071, 1076, 5 U.S.P.Q. 2d 1596, 1600 (Fed. Cir. 1988) ("Dependant claims are nonobvious under section 103 if the independent claim from which they depend are nonobvious.").

**CONCLUSION**


In view of the foregoing, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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